



Vision • Commitment • Pride

FOREST STEWARDSHIP MANAGEMENT PLAN

Prepared For:
Carroll County BOE

Prepared By:
Jim Strong
MFC

Time Period Covered by This Plan:
2012 - 2021

Date Plan Prepared:
2012-02-15

Plan Type:
Stewardship / Stewardship

This plan was developed in accordance with the rules of the Stewardship program.

Property Name: S16-T7N-R2E

MISSISSIPPI FOREST STEWARDSHIP PROGRAM

TABLE OF CONTENTS

LANDOWNER INFORMATION	3
FORESTER INFORMATION	3
DISCLAIMER	3
INTRODUCTION	3
OBJECTIVES	4
PROPERTY DESCRIPTION	4
GENERAL PROPERTY RECOMMENDATIONS	5
SOIL TYPES	7
STRATA	9
OTHER PLAN ACTIVITIES	13
PLAN MAP	14
STRATA ACTIVITY SCHEDULE	15

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

LANDOWNER INFORMATION

Name: Carroll County BOE
Mailing Address: P O Box 256
City, State, Zip: Carrollton, MS 38917
Country: United States of America
Contact Numbers: Home Number:
Office Number: 662-237-9276
Fax Number:

E-mail Address:
Social Security Number (optional):

FORESTER INFORMATION

Name: Jim Strong , Service Forester
Forester Number: 00898
Organization: MFC
Street Address: P O Box 95
City, State, Zip: Carrollton, MS 38917
Contact Numbers: Office Number: 662-237-6732
Fax Number:
E-mail Address: jstrong@mfc.state.ms.us

PROPERTY LOCATION

County: Carroll Total Acres: 666 Latitude: -90.09 Longitude: 33.34
Section: 16 Township: 17N Range: 2E

DISCLAIMER

This information was derived from a small sampling of the forest resources. It reflects a statistical estimation that is only intended to be accurate enough for the purposes of making decisions for the short-term management of these resources. These estimations are temporally static. Events and circumstances may occur within the survey area that will physically alter the forest resources and therefore will not be reflected in this plan.

INTRODUCTION

This Forest Stewardship Management Plan will serve as a guide for accomplishing the goals and objectives for your property. In addition to addressing your specific goals and objectives, this plan includes recommendations for maintaining soil and water quality and protecting your forest from insects, disease, and wildfire. Recommendations are based on observation and assessment of the site.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

OBJECTIVES

Timber Production

The goal is to produce high quality sawtimber. This will be accomplished through reforestation and timber stand improvement practices such as herbicide applications, prescribed burning, thinning at specified intervals, and other silvicultural practices. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Wildlife Management - General

The goal is to provide a diversity of habitats suitable for a variety of game and non-game wildlife species. Habitat management will focus on developing a variety of food, cover, water, and space. This will be accomplished by establishing and maintaining access roads and firelanes, providing openings within the forest, and the management of trees located within the Streamside Management Zone

PROPERTY DESCRIPTION

General Property Information

This section of 640 acres is located in the South Western part of Carroll County approximately 1 mile from the Holmes and Carroll County line. Access to this section is by way of County Road #'s 272 and CR # 62 which runs through the section. The entire section is leased for mining and has active gravel mining at the present time. Pine plantations are established on most of the land that has not been mined.

Timber will be required to be harvested in a timely manner in order for the gravel to be removed. Scheduled timber harvests in this plan will depend on when the lease holder wishes to remove the gravel. The MFC will be given adequate time to conduct the timber sales.

Water Resources

The drainages of this section are in the Abiaca Creek watershed. Abiaca Creek is a tributary of the Yazoo River. Fisher Creek runs through this section. The objective is to protect, preserve and enhance all water sources and drainages on or transecting the property. Mississippi Best Management Practices will be implemented during all aspects of the management of this property to minimize the impact on water resources.

Timber Production

The goal is to maximize the production of high quality timber. This will be accomplished through the application of timely thinning and other silvicultural practices designed to enhance timber quality and growth. Forestry Best Management Practices will be implemented to prevent erosion and protect water quality.

Threatened and Endangered Species

No threatened and endangered species were identified during the reconnaissance and evaluation of this property.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

If any threatened and /or endangered species are discovered, immediate management procedures will be applied to protect these sensitive natural resources for future generations.

Interaction with Surrounding Property

Prescribed practices should be carried out in a manner that will minimize adverse impacts on surrounding properties. Consideration should be given to potential air, water, visual, and other impacts. In addition, practices carried out should have positive effects on the surrounding community such as improved wildlife habitat and soil stabilization.

Soils General

Soils were evaluated on the property to determine the suitability of the site for the proposed activities. Forest practices were planned so as to minimize erosion or other adverse effects on the soil. The following soils are identified for this property: Adler Silt Loam, Gullied Lnd Complex, Memphis Silt Loam, Udorthents Series and the Memphis Natchez Association. For a description of these soils, please see the Soil Type Section in this plan.

Archeological and Cultural

No Archeological and Cultural Resources were identified during a reconnaissance of the property.

If any Archeological and/or Cultural Resources are discovered during the management of this property, immediate management practices will be applied.

GENERAL PROPERTY RECOMMENDATIONS

Forest Protection

A vigorous growing stand is the best defense to an attack from a variety of forest insects, plants and pathogens.

Insects and Diseases

Trees are subject to attack from insects and diseases. Different insects and diseases affect trees according to the age, species, and condition of the trees. Planted stands of pines and pure stands of hardwoods are particularly susceptible to attack. Since there are many different insects and diseases, no attempt will be made here to explain all of them. The property should be inspected at least annually for possible signs of insect and disease activity. Some things to look for are:

MISSISSIPPI FORESTRY COMMISSION FOREST STEWARDSHIP MANAGEMENT PLAN

- Unseasonable leaf fall
- Discoloration of leaves or needles
- Pitch pockets on pine trees
- Heavy defoliation of hardwood leaves
- Groups of three or more dying trees within a stand

This list does not cover all instances of insect or disease attacks. If anything unusual is noticed, report it to a forester. In most cases, insect and disease problems can be controlled if discovered early.

Fire Protection

The Mississippi Forestry Commission will establish and maintain all firebreaks around the property and other forest management areas on the property. These firebreaks will help to protect your property from wildfires. All firebreaks will be established and maintained according to Mississippi Best Management Practices.

Grazing

Tree seedlings should be protected from grazing until such time as the terminal bud of the sapling is beyond reach of livestock. Domestic livestock should be denied access to the tree planting area.

Boundary Lines

It is the responsibility of the landowner to ensure that all property lines and boundaries designating areas to receive forestry work are clearly identified and visible to all contractors.

Note: Some forest practices may cause temporary adverse environmental or aesthetic impacts. These practices will only cause short-term adverse impacts where they are installed. Special efforts will be made to minimize adverse effects when carrying out any of the practices. Examples include: site preparation, planting, prescribed fires, firebreak installation and maintenance, road installation and maintenance, pesticide applications and timber harvesting.

Water Quality Protection

The objective of the landowner is to protect, preserve and enhance all water sources on or transecting the property. This can best be achieved by implementation of Best Management Practices in all aspects of the management of the property.

Aesthetics

The goal is to assure that the property is managed in such a way that is aesthetically pleasing to the landowner as well as the community. Activities could include, maintaining buffer strips along the road and adjacent to the home site, planting wildflowers along the road, and trees with attractive fall and spring color along the drive and near the home site.

MISSISSIPPI FORESTRY COMMISSION FOREST STEWARDSHIP MANAGEMENT PLAN

Department of Environmental Quality requires that all land that is mined be reclaimed according to their regulations which is to put the land back to a grass cover or to trees. The Mississippi Forestry Commission would recommend that all reclaimed land be put back into trees.

Ecological Restoration

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. A reconnaissance of the property has been conducted and no ecological restoration activities are recommended at this time.

Wildlife Mgt. Target Species

The objective of this practice is to provide habitat best suited for the featured or target species. Habitat management will focus on providing food, cover, water, and space to facilitate the target species.

Environmental Education

Environmental educational goals are to provide educational opportunities for children and adults through the development of items such as nature trails with tree identification markers, wildlife viewing areas, picnic areas, parking, public restroom facilities.

Wildlife Management General

The goal is to provide a diversity of habitats suited for a variety of game and non-game wildlife species. Habitat management will focus on providing a variety of food, cover, water, and space. This will be accomplished, in part, by establishing and maintaining access roads and firelanes, providing openings within the forest, and leaving mast producing and den trees.

The section is divided into 2 different Hunting Clubs, These clubs mainly focus on deer and turkey hunting,

Timber Management

Timber management goals for this property are to manage timber resources in such a manner as to maximize timber production throughout the life of the stand.

Recreation

According to landowner objectives the recreational use of the property could prove to be an avenue for personal enjoyment or for generating income. An evaluation of your property should be conducted and a plan developed to accomplish your specific goals for recreational activities on your property.

SOIL TYPES

21

The Adler component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of silty alluvium deposits.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

46

Generated brief soil descriptions are created for major soil components. The Gullied land is a miscellaneous area. The Loring component makes up 27 percent of the map unit. Slopes are 5 to 20 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer, fragipan, is 14 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

6E3

The Memphis component makes up 95 percent of the map unit. Slopes range from 5 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. Site Index for loblolly pine ranges from 90 to 105.

50

The Udorthents component makes up 95 percent of the map unit. Slopes are 5 to 45 percent. This component is on coastal plains. The parent material consists of alluvium deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

7F

The Memphis component makes up 54 percent of the map unit. Slopes are 12 to 40 percent. This component is on uplands. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

classification is 7e. This soil does not meet hydric criteria. The Natchez component makes up 32 percent of the map unit. Slopes are 17 to 45 percent. This component is on hillslopes. The parent material consists of loess deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

STRATA

Strata 1

Stand Description

This chip-n-saw stand #'s 4 and # 9 of 54.33 is a well stocked loblolly pine plantation established in February 1991 and was first thinned in December 2005. There are approximately 141 trees per acre that average 8 inches in diameter with an average height of 45 feet.

A prescribe burn was carried out during the winter of 2007 which removed the logging debris and helped to promote the tender browse vegetation for the native wildlife.

Stand Recommendations

This loblolly pine stand will be managed on a 35 year rotation using sound forestry management practices. These management practices will benefit the native wildlife through thinnings, burning and other forestry practices.

Activity Recommendations

Harvest

This loblolly pine stand should be thinned to a BA of 75 +/- in 2015.

The thinning will allow the remaining trees to reach sawtimber size more quickly and will allow more sunlight to reach the ground floor which will create more tender vegetation for the native wildlife.

Fire Protection

A prescribed fire is recommended for this site in the winter of 2016 in order to reduce fuel loading and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

The burning will help reduce the logging debris and will prepare the ground floor for the tender grass vegetation to grow for the native wildlife.

Strata 2

Stand Description

Strata 2 consists of the following stands : # 20 for a total of 43.69 acres of moderately stocked hardwood pulpwood and loblolly pines. The pines were planted 1991 but only approximately 120 trees to the acre survive at this time. The pines have an average diameter of 8 inches and are approximately 35 feet tall. There are approximately 68 hardwood pulpwood trees of mainly gums and oaks per acre with an average diameter of 8 inches and that average 35 feet in height. The average age of the pines and the hardwoods is approximately 20 years old.

Stand Recommendations

This loblolly pine stand will be managed on a 35 year rotation using sound forestry management practices.

Since the entire section is leased for gravel mining, this stand may be harvested in the next few years. The lease holder-Apac Company Inc. will be required to give the Mississippi Forestry Commission adequate time for the timber to be sold and removed.

Activity Recommendations

Harvest

This stand should be thinned to a BA of 75 +/- in 2015. Also all hardwoods should be harvested during the pine thinning.

The thinning will allow sunlight to reach the ground floor which will allow tender browse to grow for the native wildlife.

Strata 3

Stand Description

This strata consists of the following stand : # 2, # 5 and # 11 for a total of 73.6852 acres. This strata is a well stocked 20 year old loblolly pine plantation that is mainly sawtimber and chip-n-saw size timber with an average DBH of approximately 11 inches and has approximately 195 trees to the acre with an average height of 40 feet. Some scattered hardwood of gums, oaks and other species are found in the valleys and along the main creek.

Due to access problems, thinning has not taken place. A large canyon and a large creek blocks access through the School Land. The other way through to the stands is through an adjoining landowner which in the past has wanted a large fee to cross his land.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

The BOE will need to address the access issue with the adjoining landowner and resolve the issue before we can proceed with a timber sale.

Stand Recommendations

This loblolly pine stand will be managed on a 35 year rotation using sound forestry management practices. These management practices will benefit the native wildlife found on the tract through burning, thinnings and other forestry practices.

Activity Recommendations

Fire Protection

A prescribed fire is recommended for this site in the winter of 2015 in order to reduce fuel loading and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

Harvest

This Strata should be row thinned to a BA of 75 +/- in 2014.

The thinning will allow more sunlight and growing space for the remaining trees which will benefit the native wildlife by creating more tender vegetation for them to feed on.

Strata 4

Stand Description

This strata consists of the following stands : #13, # 17 , # 18, and # 19 for a total of 30.24 acres. This strata is 20 year old loblolly well stocked pine plantation that is mainly pulpwood size timber with an average diameter of approximately 7.0 inches and has approximately 220 trees to the acre. A lot of mixed hardwood species such as sweetgum, oak and other species are scattered throughout the pines that average 7 inches in diameter.

Stand Recommendations

This loblolly pine stand will be managed on a 35 year rotation using sound forestry management practices. These management practices such as burning, thinnings will benefit the native wildlife.

Activity Recommendations

Harvest

This stand should be thinned to a BA of 75 +/- in 2015. All hardwoods should be removed during the thinning operation which will allow more growing room for the pines.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

The thinning will allow much needed sunlight to reach the ground floor which will create more tender browse for the native wildlife.

Fire Protection

A prescribed fire is recommended for this site in the fall of 2016 in order to reduce fuel loading and the potential for a wildfire to occur. A prescribed burning plan must be developed and followed in the application of the burn. Because of equipment, personnel and weather requirements, the application of a prescribed fire is limited to only those days that meet requirements of the burning plan. A certified prescribed burning manager should be employed to conduct the burn. The Mississippi Forestry Commission (on a limited basis) and other certified prescribed burning vendors are available to conduct prescribed burning.

The burning will open the pine stand up by removing the logging debris and heavy undergrowth which will create more tender browse for the native wildlife.

Strata 5

Stand Description

This chip-n-saw stand (# 7) of 49 acres is a well stocked loblolly pine plantation established in February 1991 and was thinned in December 2005. There are approximately 139 pines to the acre that average 9 inches in diameter and that average 40 feet in height. Also located in the drainages and around the lower parts of the stand, there are 84 hardwood trees to the acre that average 10 inches in diameter and that average 30 feet in height.

Strata Recommendations

All timber will need to be harvested in this strata due to the gravel mining operation by lease holder - Apac Company that is scheduled to move in this area in June 2012.

Activity Recommendations

Harvest

All timber in this strata is scheduled to be sold in July 2012 in order for the gravel mining operation to expand their gravel pit. Bids are to be opened up on July 7, 2011 and the timber will be sold to the highest bid and the timber will need to be removed by April 2012. Volumes to be sold are as follows:

1032 tons Hardwood Pulpwood, 450 tons Oak Sawtimber, 216 tons Sweetgum Sawtimber, 157 tons Miscellaneous Hardwood Sawtimber, 173 tons Pine Sawtimber, 1023 tons Pine Chip-n-Saw and 1624 tons Pine Pulpwood.

**MISSISSIPPI FORESTRY COMMISSION
FOREST STEWARDSHIP MANAGEMENT PLAN**

OTHER PLAN ACTIVITIES

Boundary Lines

Line Description

The property boundary line is painted around all 4 miles of the section of land in red paint at eye level mainly on hacked marks. and needs to re-painted approximately every 4 years.

Line Recommendations

The 4 miles of boundary lines will be repainted with red paint at eye level on the old hacked marks and all corners marked with a X during the summer of 2012.

Line Recommendations

The 4 miles of Boundary Lines will be repainted with red paint at eye level on the old hacked marks and all corners marked with a X during the summer of 2017.

16-17N-2E Carroll BOE

16-17N-2E Carroll BOE



GRAVEL PIT
2008 to 2018
665.94 Acres



Stand Activity Schedule for
Carroll County BOE
16 17N 2E

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
2012					
5	7	Harvest, Mechanical, Liquidation, Machine, Loblolly	49	\$535.57	\$40,107.48
Yearly Totals			49	\$535.57	\$40,107.48
2014					
3	2	Harvest, Mechanical, Thin, Machine, Loblolly	6	\$210.00	\$2,315.04
3	5	Harvest, Mechanical, Thin, Machine, Loblolly	4	\$126.70	\$1,396.74
3	11	Harvest, Mechanical, Thin, Machine, Loblolly	64	\$2,240.00	\$19,788.80
Yearly Totals			74	\$2,576.70	\$23,500.58
2015					
1	4	Harvest, Mechanical, Thin, Machine, Loblolly	39	\$1,365.00	\$8,402.94
1	9	Harvest, Mechanical, Thin, Machine, Loblolly	107	\$3,745.00	\$23,054.22
2	20	Harvest, Mechanical, Thin, Machine, Loblolly	44	\$1,540.00	\$10,315.36
3	2	Fire Protection, Other, Burn, Hand, Fuel Reduction	6	\$150.00	\$0.00
3	5	Fire Protection, Other, Burn, Hand, Fuel Reduction	4	\$90.50	\$0.00
3	11	Fire Protection, Other, Burn, Hand, Fuel Reduction	64	\$1,600.00	\$0.00
4	13	Harvest, Mechanical, Thin, Machine, Loblolly	10	\$350.00	\$4,273.00
4	17	Harvest, Mechanical, Thin, Machine, Loblolly	15	\$525.00	\$5,767.80
4	18	Harvest, Mechanical, Thin, Machine, Loblolly	4	\$140.00	\$1,538.08
Yearly Totals			293	\$9,505.50	\$53,351.40
2016					
1	4	Fire Protection, Other, Burn, Hand, Fuel Reduction	39	\$975.00	\$0.00

Strata	Stand	Activity	Acre	Est. Cost	Est. Revenue
1	9	Fire Protection, Other, Burn, Hand, Fuel Reduction	107	\$2,675.00	\$0.00
4	13	Fire Protection, Other, Burn, Hand, Fuel Reduction	10	\$250.00	\$0.00
4	17	Fire Protection, Other, Burn, Hand, Fuel Reduction	15	\$375.00	\$0.00
4	18	Fire Protection, Other, Burn, Hand, Fuel Reduction	4	\$100.00	\$0.00
4	19	Fire Protection, Other, Burn, Hand, Fuel Reduction	1	\$25.00	\$0.00
4	19	Harvest, Mechanical, Thin, Machine, Loblolly	1	\$35.00	\$384.52
Yearly Totals			177	\$4,435.00	\$384.52
Grand Totals			592	\$17,052.77	\$117,343.98